

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In Re Application: Bradley J. Swearingen et al.

Serial No.: 09/663,151

Filed: September 15, 2000

Art Unit: 3691

Confirmation No.: 2668

Examiner: Subramanian, Narayanswamy

For: Method and System for Executing Trades in a
User Preferred Security

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL BRIEF ON APPEAL

Dear Sir:

This is a Supplemental Brief on Appeal, filed in response to an Office Action dated March 19, 2008. This Brief is filed following a Notice of Appeal filed June 19, 2008 and a Brief on Appeal filed November 27, 2007.

1. Real Party in Interest

The real party in interest is Charles Schwab & Co., Inc., having a place of business at 101 Montgomery Street, San Francisco, CA 94104.

2. Related Appeals and Interferences

This appeal is supplemental to the Brief On Appeal filed November 27, 2007.

3. Status of Claims

Claims 1-66 have been cancelled.

Claims 67-114 stand rejected and are under appeal.

4. Status of Amendments

Appendix A to this brief includes the claims as currently presented. No amendments have been filed subsequent to the most recent final rejection and Office Action reopening prosecution.

5. Summary of the Claimed Subject Matter

The claims on appeal relate to methods and systems for executing trades in a user preferred security. The claims are grouped according to the independent claim that they depend from.

According to independent claim 67 on appeal, a computer readable medium (page 6, lines 8-16) having a sequence of instructions which, when executed by a processing entity, effectuates a trade in a user selected user preferred security, the computer readable medium comprising, a code segment for

identifying user preferred securities from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing (12, page 56, lines 3-7; Figure 4; 82, page 32, lines 1-4); a code segment for generating a graph in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities (120, Fig. 4; page 37, lines 18-21; 14, page 56, lines 7-11); a code segment for receiving a user selection of one of the user preferred securities represented on the graph (page 46, lines 9-19; page 47, lines 14-17; page 56, lines 7-15); a code segment for associating order parameters with the user selected user preferred security (page 15, line 17 - page 16 line 16; page 47, lines 14-19; page 49, lines 6-9, 14-21; page 50, lines 1-3); and a code segment for sending an order to execute a trade in the user selected user preferred security according to the order parameters (250, Fig. 10A, page 46, line 3; 274, page 50, line 7; page 29, line 14 - page 30, line 21.

According to independent claim 82 on appeal, a computer readable medium (page 6, lines 8-16) having a sequence of instructions which, when executed by a processing entity, effectuates a trade in a user selected user preferred security,

the computer readable medium comprising, a code segment for receiving security data for a plurality of securities from a security data source (12, page 14, lines 3-13); a code segment for receiving from a user at least two user specific criteria including at least one criterion related to pricing (82, page 21, line 19 - page 22, line 2); a code segment for automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user; a code segment for receiving at least first, second and third user specific parameters from the user (page 21, line 19 - page 22, line 3); a code segment for generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin (120 of Fig. 4; page 37, lines 18-21); a code segment for plotting each of the user preferred securities as an icon on the graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis, thereby representing and graphically differentiating the user preferred securities from one another (202 of Fig. 6A; page 38, lines 1-20); a code segment for receiving a user selection of one of the user preferred securities represented on

the graph (page 46, lines 9-19; page 47, lines 14-17; page 56, lines 7-15); a code segment for associating order parameters with the user selected user preferred security (page 15, line 17 - page 16 line 16; page 47, lines 14-19; page 49, lines 6-9, 14-21; page 50, lines 1-3); and a code segment for sending an order to execute a trade in the user selected user preferred security according to the order parameters (250, Fig. 10A, page 46, line 3; 274, page 50, line 7; page 29, line 14 - page 30, line 21).

According to independent claim 83 on appeal, a system (Figure 1; page 6, lines 8-16; page 12, line 10 - page 16, line 16) for enabling a trade in a user selected user preferred security, the system comprising, means for identifying user preferred securities (12, page 56, lines 3-7; Figure 4; 82, page 32, lines 1-4) from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing; means for generating a graph (120, Fig. 4; page 37, lines 18-21; 14, page 56, lines 7-11) in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities; means for receiving a user selection of one of the user preferred securities represented on the graph (page 46, lines 9-19; page 47, lines 14-17; page 56, lines 7-15); means

for associating order parameters with the user selected user preferred security (page 15, line 17 - page 16 line 16; page 47, lines 14-19; page 49, lines 6-9, 14-21; page 50, lines 1-3); and means for sending an order to execute a trade in the user selected user preferred security according to the order parameters (250, Fig. 10A, page 46, line 3; 274, page 50, line 7; page 29, line 14 - page 30, line 21).

According to independent claim 98 on appeal, a system (Figure 1; page 6, lines 8-16; page 12, line 10 - page 16, line 16) for enabling a trade in a user selected user preferred security, the system comprising, means for receiving security data for a plurality of securities from a security data source (12, page 14, lines 3-13); means for receiving from a user at least two user specific criteria including at least one criterion related to pricing (82, page 21, line 19 - page 22, line 2); means for automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user (page 21, line 19 - page 22, line 3); means for receiving at least first, second and third user specific parameters from the user (page 39, lines 5-9); means for generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin (120 of Fig. 4; page 37, lines 18-21); means for plotting each of the user preferred securities as an icon on the

graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis, thereby representing and graphically differentiating the user preferred securities from one another (202 of Fig. 6A; page 38, lines 1-20); means for receiving a user selection of one of the user preferred securities represented on the graph (page 46, lines 9-19; page 47, lines 14-17; page 56, lines 7-15); means for associating order parameters with the user selected user preferred security (page 15, line 17 - page 16 line 16; page 47, lines 14-19; page 49, lines 6-9, 14-21; page 50, lines 1-3); and means for sending an order to execute a trade in the user selected user preferred security according to the order parameters (250, Fig. 10A, page 46, line 3; 274, page 50, line 7; page 29, line 14 - page 30, line 21).

According to independent claim 99, a method for enabling a trade in a user selected user preferred security (Fig. 11; page 6, lines 8-16;), the method comprising, identifying user preferred securities from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing (404 of Fig. 11, page 55, line 20;

410 of Fig. 11, page 56, line 3; 412 of Fig. 11, page 56, line 7); generating a graph in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities (414 of Fig. 11, page 56, line 8; 416 of Fig. 11, page 56, line 9; page 56, lines 9-11); receiving a user selection of one of the user preferred securities represented on the graph (418 of Fig. 11, page 56, lines 11); associating order parameters with the user selected user preferred security (page 49, lines 6-9, 14-21; page 50, lines 1-3; page 56, lines 7-11); and sending an order to execute a trade in the user selected user preferred security according to the order parameters (420 of Fig. 11, page 56, line 15).

According to independent claim 114, a method for enabling a trade in a user selected user preferred security (Fig. 11; page 6, lines 8-16;), the method comprising, receiving security data for a plurality of securities from a security data source (404 of Fig. 11, page 55, line 20); receiving from a user at least two user specific criteria including at least one criterion related to pricing (410 of Fig. 11, page 56, line 3); automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user (412 of Fig. 11, page

56, line 7); receiving at least first, second and third user specific parameters from the user (414 of Fig. 11, page 56, line 8); generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin (416 of Fig. 11, page 56, line 9); plotting each of the user preferred securities as an icon on the graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis, thereby representing and graphically differentiating the user preferred securities from one another (page 56, lines 9-11); receiving a user selection of one of the user preferred securities represented on the graph (418 of Fig. 11, page 56, lines 11); associating order parameters with the user selected user preferred security (page 49, lines 6-9, 14-21; page 50, lines 1-3; page 56, lines 7-11); and sending an order to execute a trade in the user selected user preferred security according to the order parameters (420 of Fig. 11, page 56, line 15).

6. Grounds of Rejection to be Reviewed on Appeal

Extensive prosecution of this application since it was filed in September 2000 has removed all prior art rejections and

rejections on all formal matters. Only a rejection under 35 U.S.C. § 101 remains for the Board's consideration. Appellants respectfully request review of the following rejections made by the Examiner:

The Examiner's rejection of claims 67-114 under 35 U.S.C. 101 as being directed to non-statutory subject matter (Office Action dated March 19, 2008, pp. 2-10).

7. Argument

The following arguments are in response to the Examiner's assertions presented in the Office Action dated March 19, 2008. Appellants' arguments address the claims as they should be considered. In addressing the issues in the Office Action, Appellants group the claims in the arguments as follows: Claims 67-82; Claims 83-98; Claims 99-113; and Claim 114.

I. Judicial Exception to 35 U.S.C. 101

The Examiner initially rejects claims 67-114 as being directed to non-statutory subject matter:

As such the claimed invention is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea, natural phenomenon, or law of nature) and is not directed to a practical application of such judicial exception because the claims do not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result. (Page 3 in Office Action dated 19 March 2007).

a. Rejections based on Judicial Exception to 35 U.S.C. 101

The Examiner has asserted that the claims were drawn to a judicial exception to 35 U.S.C. § 101, and that the claims were not directed to a practical application because the claims do not require any physical transformation and the claimed invention did not produce a useful, concrete and tangible result.

The Examiner has improperly applied the standards for statutory subject matter, especially as pertains to software/instructions, computer readable medium containing functionally descriptive material, systems comprising same, and result oriented methods using such systems. The instant claims are not drawn to a judicial exception to statutory subject matter under 35 U.S.C. 101. Instead the claimed invention is directed to a practical application that produces a useful, concrete and tangible result: an indication to make a transaction. Appellants will focus on the claims drawn to a manufacture, machine (system), and then on machine-implemented process claims under the tests the Examiner improperly applied.

i. Claims 67-82 are not judicial exceptions to 35 U.S.C.

Claims 67-82 are drawn to a computer readable medium having a sequence of instructions (code segments) that effectuate a trade when executed. Computer programs, i.e., code segments, are a type of "functional descriptive material". When stored on a medium such as "a computer readable medium", the combination qualifies as statutory subject matter. *Examination Guidelines for Computer-Related Inventions*, 61 Fed. Reg. 7478, 7481-82 (February 28, 1996).

The case law relied upon by the Examiner is drawn ultimately to process-type claims, which do not effectively apply to the claims at issue. In *Ex parte Lundgren*, 76 USPQ2d 1385, 1407-08 (Bd. Pat. App. & Int. 2005), the Board addressed such issues where simply storing information to be read by a machine does not mean the claim is patentable. It is understood that storing data such as music on a computer readable medium does not serve as "functional descriptive material"; however, the instant claims are drawn to "functional descriptive material" stored on a computer readable medium. The computer program product claims, as instantly claimed, are directed to an article of manufacture, specifically, software stored on a computer-readable medium. The software is functional software, as instantly claimed, in the sense that it reconfigures a

general purpose computer, or computer based system, to perform a specific task. While Appellants' argument does not require that all useful and functional software be patentable in this new format, the instant claims recite a functional software (i.e., code segments) used to effectuate trades, wherein the sequence of instructions lead to an order to execute a trade based on the preceding sequence of instructions. This is useful in the field of trading within the markets, wherein the user effectively and efficiently gets the results they desire based on their own preferences. Therefore, the invention of claims 67-82 is an article of manufacture, and the underlying process produces a useful, concrete and tangible result, thereby meeting the requirements as statutorily protected and patentable subject matter under § 101.

The Examiner also misapplies the *State Street* requirement that the invention as a whole must accomplish a practical application through production of a useful, concrete and tangible result. *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 1373-74, 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998). Due to the Examiner's misapplication of *State Street*, the Examiner concluded that claims 67-82 are inoperative.

The Examiner does not dispute that the claimed invention produces a tangible result. Appellants, however, state that the

tangible, real-world result is clear in that the invention results in a trade order being sent as desired by the "user". This tangible, real-world result is readily realized by one of ordinary skill in this field.

In the Federal Circuit's *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994) decision, the court held that a particular data structure, as it exists in a computer memory, is entitled to patentable weight since storage of the data imparts physical change to the memory. In *Lowry*, the data structure permitted improved loading and manipulation of information. In the instant case the software permits improved trading within the market. The *Lowry* holding supports the understanding that software recorded on a computer readable medium is statutory subject matter that is patentable.

As to the requirement of a "concrete" result and contrary to the Examiner's assertion, claims 67 and 82, and claims depending therefrom, do produce a useful, concrete and tangible result in that an order is sent. The Examiner incorrectly contends that it is not clear how a certain graph will result in the same selection of securities by a "user", and that since there is no guarantee that the "user" selection will be identical for all iterations of the method, this step does not necessarily lead to concrete results. There is absolutely no requirement that the "user" selection be identical for all

iterations of the method. In order to meet the utility requirement, the invention need only produce a useful, concrete and tangible result, and this requirement is clearly met by the claimed invention. In fact, the sending of an order is itself a useful, concrete and tangible result. In addition, claims 67 and 82, at the very least will prompt an attempt to trade the security according to the order, wherein the order is based on the "user's" selected iterations for each trade desired by the "user". Such an attempt in and of itself is also a useful, concrete and tangible result. Therefore, whether a trade actually occurs is moot for the purposes of a useful, concrete and tangible result. While there is no requirement of perfection in the invention under a § 101 analysis, the Appellants assert that in a substantial majority of situations the trade results as desired. Nonetheless, the underlying process sends the order to execute the trade without hindrance.

In support of the concreteness-of-result requirement, the Examiner cites, but mischaracterizes, the holding in *In re Swartz*, 232 F.3d 862, 864 (Fed. Cir. 2000). The *Swartz* Court held that where asserted results produced by the claimed invention are "irreproducible," the claim should be rejected under §101. The Examiner stretches the meaning of the word "irreproducible" used by the *Swartz* Court to mean that the invention has to produce the same result at all times. The

Examiner declares that the opposite of concrete is "unrepeatable or unpredictable," and then seeks to prove, incorrectly, that the claims produce "unrepeatable or unpredictable" results because the user can select different securities causing the trade of a different security, thereby changing the result. In other words, the Examiner takes the position that if a result is unrepeatable, it is unpatentable: this is not the law.

The *Swartz* court did not state or intend that meaning. For an invention to be statutory under the Examiner's interpretation of the *Swartz* case, the claims would have to specifically name a security and the invention would have to execute a trade of that security and no other. Such an invention would not be useful for anything other than that particular security. *In re Swartz* did not read into the patent statute such a severely restrictive requirement on the scientific creativity in patentable inventions. *In re Swartz* does not require uniformity of the results beyond uniformity of inputs. *In re Swartz* provides that the invention should be able to reproduce the same result given the same set of inputs, not regardless of inputs.

In accordance with *In re Swartz*, claims 67 and 82, and claims depending therefrom, do produce the same order for the same trade with the same inputs. Therefore, the claimed invention produces a concrete result - the sending of an order for a trade execution based upon the inputs. The result is

reproducible if the underlying process of the claim is followed again with the same security in the manner claimed. The underlying process embodied in claims 67 and 82 further produce reproducible results in that an order to execute a trade in the user selected security is reproducibly sent for any security the user may select. Therefore, claims 67 and 82 contain subject matter patentable under 35 U.S.C. 101, and implementing the underlying steps of claims 67 and 82 does produce useful, concrete and tangible results that are reproducible under the *In re Swartz* holding.

As an example of how the *Swartz* analysis applies to reproducibility, the following is offered to rebut the Examiner's incorrect assertions. When the sequences of instructions on the computer readable medium are executed according to the underlying process of claims 67 and 82, an order is sent to execute a trade. Based upon at least two user specific criteria (at least one related to pricing), a code segment on the computer readable medium identifies user preferred securities. Subsequently, a code segment on the computer readable medium generates a graph of differentiated user preferred securities based upon values of at least three specific parameters associated with each differentiated user preferred security. Then, another code segment on the computer readable medium receives a user selection of one of the user

preferred securities represented on the graph generated by the previous code segment on the computer readable medium. Then the next code segment on the computer readable medium associates the selected user preferred security with order parameters. Then the order to execute the trade of the user selected user preferred security according to the order parameters is sent by another code segment on the computer readable medium. Therefore, contrary to the Examiner's assertions, the underlying process of claims 67 and 82, and claims depending therefrom, is repeatable and the result of effectuating a trade in a user selected user preferred security is reproducible. Neither the specification nor the claims require the user to enter the exact same criteria values or specific parameters for each time the underlying process is executed by the processing entity.

It is clear from the specification, and to one of skill in the field, that a "user" will deal in many securities that are affected by both market and personal influences that may require the "user" to adjust criteria and parameter values for the trade. Therefore, it is clear that particular inputs (i.e., preferred securities, user specific criteria, and values of specific parameters) can and will be changed; however, the result of the underlying process remains the same, whereby "an order to execute a trade" is sent when that code segment on the computer readable medium is executed by a processing entity.

Also contrary to the Examiner's assertions, if all the same inputs are used, then the code segments on the computer readable medium will result in the sending of the order to execute the trade in the same user selected user preferred security according to the order parameters. Therefore, the inputs can be changed or remain the same, however, the result of the underlying process is that an order to execute a trade in a user selected user preferred security according to the order parameters will be sent. Thus, the *Swartz* holding supports the instant invention of claims 67 and 82, and claims depending therefrom.

As to the "useful" result requirement and contrary to the Examiner's assertions, the claimed invention produces a "useful" result. This is clear and unambiguous from the result specifically recited in the claims; "effectuates a trade in a user selected user preferred security" and "sending an order to execute a trade in the user selected user preferred security according to the order parameters." The claimed "useful" result is specific, substantial and credible in its utility as seen throughout the specification and as viewed through the knowledge within in the art and field of securities markets.

The Appellants argue that the "underlying process" of claims 67-82 is statutory and that when the sequence of instructions (code segments) on the computer readable medium is

executed the "underlying process" performs a useful, concrete and tangible result. As argued *supra*, functional descriptive material (*i.e.*, computer code) stored on a computer readable medium is within the statutory subject matter of 35 U.S.C. 101. With claims 67-82 properly read, the claimed computer readable medium is statutory subject matter. Therefore, when the "underlying process" is performed with a useful, concrete and tangible result, as is the case in claims 67-82, then the "underlying process", as well as the claimed computer readable medium, is statutory subject matter.

Accordingly, the Examiner has failed to demonstrate that the invention of claims 67-82 is non-statutory subject matter.

ii. Claims 83-98 are not judicial exceptions to 35 U.S.C. 101

Claims 83-98 are drawn to a system for enabling a trade based on a computer readable medium having a sequence of instructions (code segments) that effectuate a trade when executed. The rationale of why these claims are protected subject matter under 35 U.S.C. 101 is similar to that for claims 67-82. The "means for" language in claims does not detract from the fact that the claimed system enables trades based on a computer readable medium having a sequence of instructions (code segments) that effectuate a trade when executed.

The system as defined in the disclosure functions through the computer readable medium claimed in claims 67-82. The result produced by the system is the same useful, concrete and tangible result as that produced when the code segments described *supra* are executed. Furthermore, *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994) announced that where claims recite a machine and means clauses, the claims are to be reviewed as machine (apparatus) claims and not process claims. This is true where the specification supports such a machine/apparatus claim. The specification discloses in great detail the components that form "a system" and thereby what "means" are necessary to form "a system" within the claimed invention. As in *Alappat*, the "means" clearly have support and structure as provided in the specification. This is indicated by example in Section 5 "Summary of the Claimed Subject Matter", *supra*, at pages 2-9, specifically pages 5-7. This is clear evidence that the presently claimed system properly satisfies the sixth paragraph of 35 U.S.C. § 112 and 35 U.S.C. § 101. The system as disclosed and claimed is based on the sequence of code segments embodied on computer readable medium that instructs the system on how to perform the underlying process to a useful, concrete and tangible result. The "means" as claimed and disclosed require the computer program (code segments) embodied on the computer readable medium. Therefore, the Examiner's

arguments at pages 5-6 regarding these claims are without merit. The system as claimed is supported to have functionality for the claimed purpose. A careful review of the specification demonstrates and defines the "means" by which the system enables a trade. Therefore, the claims are not rendered inoperative lacking utility.

The Examiner, at page 6 of the Office Action, appears to imply that the system of claims 83-98 comprises a disembodied software program, by stating that the claims:

"merely recite elements of a system ("means for" are broadly interpreted to correspond to software program elements and not tangible hardware components) without showing any ability to realize functionality of the recited elements (i.e. functional descriptive material per se) and therefore is rendered inoperative lacking any utility. Note that a computer (or software program) code cannot by itself perform the underlying function until it is loaded on some computer readable memory and accessed by the computer (or a processor)."

The system of claims 83-98 is disclosed as utilizing computer program embodied on a computer readable medium. See *Specification* at page 6, lines 8-16, for example. Therefore, the system of claims 83-98 do not comprise any disembodied data structure or disembodied functional descriptive material. The "means" on which claims 83-98 are premised, are clearly and unambiguously defined in the *Specification*. The "means" are disclosed in the *specification* as utilizing the "computer

program embodied on a computer readable medium on a client system and a computer program embodied on a computer readable medium on a server system." *Specification* at page 6, lines 8-16. The "means" require that the disclosed structure thereof be in association with or operative through and by the "computer program embodied on a computer readable medium..." Therefore, the Examiner's conclusion that these claims are inoperative is improper.

Contrary to the Examiner's assertion under and mischaracterization of the *In re Swartz* holding discussed *supra*, the system of claims 83-98 would produce the same order for the same trade with the same inputs. Appellants argue here as before that the system is designed to receive the same or different inputs depending on the user's preferences; therefore, the security for which an order to trade is executed may and can change depending on the inputs from the user. Ultimately, the reproducible result is an order to execute the trade. Therefore, the system of claims 83-98 produces a useful, concrete and tangible result.

The system as claimed and disclosed utilizes "means" for enabling a trade. The "means" are part of the statutory subject matter. The Appellants argue that the "underlying process" and the system of claims 83-98 are statutory and that when the

sequence of "means" is executed the "underlying process" performs a useful, concrete and tangible result.

As argued *supra*, functional descriptive material (*i.e.*, computer code) stored on a computer readable medium is within the statutory subject matter of 35 U.S.C. 101. This reasoning applies to the system (*i.e.*, a machine under § 101) of claims 83-98. With claims 83-98 properly read, the claimed system is statutory subject matter. Therefore, when the "underlying process" is performed with a useful, concrete and tangible result, as is the case in claims 83-98, then the "underlying process" is statutory subject matter.

The Examiner cites to *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1574 (Fed. Cir. 1994), for the purpose of saying that disembodied data structure is non-patentable. Appellants argue that this point is moot in this situation since the claimed system is not a disembodied data structure and the "system" within claims 83-98 is statutory subject matter and patentable. First and foremost, the "means" limitations of claims 83-98 provide the claimed system with the functionality and structure required to be statutory subject matter, and the claimed "means" are unambiguously described in the specification to the satisfaction of 35 U.S.C. § 112, sixth paragraph. Therefore, the Examiner improperly lent broad interpretation to the "means" of the rejected claims. The invention unambiguously discloses

that the system and method of the invention utilize a computer program embodied on a computer readable medium. *Specification* at page 6, lines 8-16. Rationally, the recited elements of claims 83-98 are required to comport to the requirement that the system and methods utilize the computer program embodied on a computer readable medium. The "means" language of claims 83-98 do not allow for any other interpretation.

Furthermore, Appellants argue that the "underlying method" of system claims 83-98 is statutory at least because the system claims are statutory subject matter. The system for enabling a trade utilizes the "means" yielding a result that is useful, concrete and tangible. This approach to "means for" language in the claims satisfies 35 U.S.C. § 112, sixth paragraph, and aligns with the *Alappat* holding.

The Examiner has failed to demonstrate that the invention of claims 83-98 is non-statutory subject matter.

iii. Claims 99-113 recite a statutory process

The Examiner improperly rejects claims 99-113 by asserting to statements regarding the merits of these claims: First, that "it is not clear as to which statutory class the claimed invention of claims" belongs (Office Action at 7); and Second, that "[t]he steps of the method are untied to another category of statutory subject matter and hence the claimed invention does

not qualify as a process under 35 U.S.C. 101." Office Action at 10. The Examiner, however, cites to and quotes several passages from a plethora of case law. The Appellants assert here that the Examiner's two statements representing the application of the law to the claimed subject matter are improper. The Appellants argue that the claimed invention is unambiguously defined as a method (process) claim under the statute, and that the method is tied to another category of statutory subject matter (i.e., an article of manufacture and machine).

The Examiner relies on case law that ultimately revolves around "business method" type claims as related to computer based systems and abstract ideas and/or mental processes. The Appellants argue here that the claimed method does not violate the general requirements of the statute or the case law as relates to the claimed invention.

There are two related considerations for the claimed subject matter of claims 99-113. First, the claimed method must be tied to another class of patentable subject matter (*In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007); and Second, there must be a practical application as within a particular art or technology (*Gottschalk v. Benson*, 409 U.S. 63, 64 (1972)).

As properly construed, the method of claims 99-113 is tied to another class of patentable subject matter, i.e., article of manufacture and machine. See *Specification* at page 6, lines 8-

16, for example. Proper construction under the USPTO's "broadest reasonable interpretation" standard defines the claim 99 method as requiring the code segments on computer readable medium (article of manufacture) and the system (machine) embodying the code segments on computer readable medium. See *Specification* at page 6, lines 8-16, for example. The USPTO determines claim scope by analyzing claim language in light of the specification as would be interpreted by one of ordinary skill in the art. *In re Am. Acad. Of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

The claim language of claims 99-113 recites the term "user" which cannot be interpreted to have any other definition in light of the specification as would be interpreted by one of ordinary skill in the securities market. A "user" as claimed repeatedly throughout the claims, is one using the system (machine) embodying the code segments on computer readable medium (article of manufacture). At no point in the claims or in the specification, can a "user" be interpreted as a person merely sitting and using pen and paper to perform the method steps of claims 99-113. The method is directed to a "user" using the system embodying the code segments on computer readable medium to send an order to execute a trade, which as argued *supra* is a useful, concrete and tangible result. Therefore, the term "user" finds clear support and antecedent

basis in the description such that the meaning of "user" can be ascertained by reference to the specification. 37 CFR 1.75(d)(1). The Examiner offered no rationale as to how the term "user" could be interpreted by one of skill in the art to be anything other than one who uses the system embodying the code segments on computer readable medium.

The dependent claims further support the Appellants' argument. Dependent claim 102 requires "preloading the order parameters prior to the step of receiving the user selection". This cannot be reasonably interpreted to be an action in the abstract without the use of a computer based system embodying software on a computer readable medium. Dependent claim 105 requires "storing information"; dependent claim 106 requires "receiving a continuously updated stream of security data"; dependent claim 107 requires "providing a continuously updated stream of security data"; dependent claim 108 requires "displaying a three dimensional coordinate system having mutually perpendicular axes" and "graphical icons located within the coordinate system"; and dependent claim 109 requires "altering characteristics of the visually distinct graphical icons". These terms are not mere superfluous and ambiguous terms. Given their broadest reasonable interpretations in light of the specification as would be interpreted by one of ordinary skill in the art, they can only be linked to the system

embodying software on a computer readable medium. The terminology is far from uncommon in those of ordinary skill in the industry and in patents themselves. "User", "preloading the order parameters", "storing information", "continuously updated stream of security data", "three dimensional coordinate system", and "graphical icons" are terms and phrases that do not lend themselves to actions merely performed by pencil and paper markings. The Examiner offered no rationale that disposes of these terms for purposes of an analysis of statutory subject matter with useful, concrete and tangible results. These terms are only used in the art in direct connection with computer based systems and software on computer readable media as disclosed throughout the specification. The Examiner did not make any attempt to reasonably interpret the claim language in light of the specification as would be interpreted by one of ordinary skill with the art. Failure to properly interpret the claim language led to the Examiner's admitted inability to classify the claimed invention as patentable subject matter. As discussed above, however, the method of claims 99-113 is patentable subject matter.

Furthermore, given that the method of claims 99-113 are tied to the computer based system and computer code on computer readable medium, the method of claims 99-113 has a practical application as argued *supra*. The method performs a useful,

concrete and tangible result, *i.e.*, sending an order to execute a trade in the user selected user preferred security, therefore the method has a practical application.

Therefore, claims 99-113 are directed to a process to produce a useful, concrete and tangible result, which is statutory subject matter patentable under 35 U.S.C. §101.

iv. Claim 114 recites a statutory process

The Examiner improperly rejects claim 114 under the same rejection as claims 99-113. Appellants again stress the fact that the method of claim 114 is directed to other classes of statutory subject matter, *i.e.*, an article of manufacture and a machine. Again, if the claim language is given the proper reasonable interpretation in light of the specification as would be interpreted by one of ordinary skill in the art, then the method of claim 114 is clearly patentable subject matter. The terms and phrases recited in claim 114 clearly indicate the method requires a computer based system embodying computer software on a computer readable medium. "User", "receiving security data for a plurality of securities from a security data source", "automatically identifying", "icon", "receiving a user selection", and "sending an order to execute a trade" are phrases and terms that are unambiguously directed to computer based systems embodying computer software on computer readable

medium. Furthermore, one of ordinary skill in the art would interpret the claim language as such especially in light of the specification. Therefore, the method of claim 114 is directed statutory subject matter under 35 U.S.C. § 101.

Finally, the method of claim 114 is a practical application having a useful, concrete and tangible result of sending an order to execute a trade in the "user" selected user preferred security according to the order parameters, as discussed and argued *supra*. Therefore, claim 114 is directed to a process that produces a useful result, which is a statutory subject matter patentable under 35 U.S.C. §101.

8. Conclusion

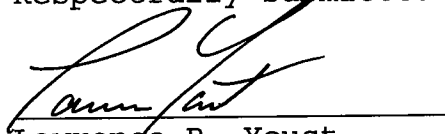
This case has been under examination since 2000. After overcoming all prior art and formal matters, the Examiner has raised yet another ground of rejection to slow down the progress of the application. This ground of rejection has no basis in law or fact, and it is unclear why it was instituted and maintained. Applicants respectfully ask that the Board reverse the Examiner and allow the claims directed to this novel, nonobvious, and useful invention to issue.

This Supplemental Brief on Appeal is filed following a Notice of Appeal filed June 19, 2008 and a Brief on Appeal filed November 27, 2007. Accordingly, this Brief is timely filed on

August 14, 2008. Appellant previously paid a Brief fee of \$510.00. Appellant believes no additional fees are due for this filing. If any additional fees are due or any overpayments have been made, however, please charge or credit Deposit Account No. 50-2816 of Patton Boggs, L.L.P.

Dated this 14th day of August, 2008

Respectfully submitted:

A handwritten signature in dark ink, appearing to read "Lawrence R. Youst", is written over a horizontal line.

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Appendix A - The Claims on Appeal

1-66. (Cancelled)

67. (Previously Presented) A computer readable medium having a sequence of instructions which, when executed by a processing entity, effectuates a trade in a user selected user preferred security, the computer readable medium comprising:

a code segment for identifying user preferred securities from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing;

a code segment for generating a graph in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities;

a code segment for receiving a user selection of one of the user preferred securities represented on the graph;

a code segment for associating order parameters with the user selected user preferred security; and

a code segment for sending an order to execute a trade in the user selected user preferred security according to the order parameters.

68. (Previously Presented) The computer readable medium as recited in claim 67 wherein the at least one criterion related to pricing is one of: Current Price, High/Low, Open/Close, Daily High/Low Count, 52 Week High/Low, Gap, Change from Close/Open, Change from X Day/Month/YTD Avg Close, X Day/Month/YTD High/Low, 15/60/120 Day SMA, 15/60/120 Day EMA, Rate of Change, 10/30/50 Day RSI, 10/30/50 Day RSI from Close, Bollinger Bands, MACD, 20/40/60 Day Momentum, 20/40/60 Day Momentum from Close, Money Flow, Money Flow (%), Williams %R, PE Ratio, and Market Cap.

69. (Previously Presented) The computer readable medium as recited in claim 67 wherein the code segment for associating order parameters with the selected user preferred security further comprises a code segment for associating a number of shares, a price and an execution location with the user selected user preferred security.

70. (Previously Presented) The computer readable medium as recited in claim 67 further comprising a code segment for preloading the order parameters prior to receiving the user selection of one of the user preferred securities represented on the graph.

71. (Previously Presented) The computer readable medium as recited in claim 67 wherein the code segment for sending an order to execute a trade in the user selected user preferred security further comprises a code segment for sending an order selected from the group comprising a buy order, a sell order, a short order and a cancel order.

72. (Previously Presented) The computer readable medium as recited in claim 67 further comprising a code segment for performing compliance analysis on the order.

73. (Previously Presented) The computer readable medium as recited in claim 67 further comprising a code segment for storing information relating to the order in a database.

74. (Previously Presented) The computer readable medium as recited in claim 67 further comprising a code segment for receiving a continuously updated stream of security data, including level one, level two and time and sales data, relating to the plurality of securities.

75. (Previously Presented) The computer readable medium as recited in claim 67 further comprising a code segment for receiving a continuously updated stream of security data, including at least one of fundamental data and analytical data, relating to the plurality of securities.

76. (Previously Presented) The computer readable medium as recited in claim 67 wherein code segment for generating a graph comprises a code segment for displaying a three dimensional coordinate system having mutually perpendicular axes intersecting at a common origin and representing the user preferred securities as visually distinct graphical icons located within the coordinate system at positions representative of the values of each of the user preferred securities.

77. (Previously Presented) The computer readable medium as recited in claim 76 wherein the code segment for generating a graph further comprises a code segment for altering characteristics of the visually distinct graphical icons to represent dimensions greater than 3.

78. (Previously Presented) The computer readable medium as recited in claim 67 wherein each of the user specific criteria is different from each of the user specific parameters.

79. (Previously Presented) The computer readable medium as recited in claim 67 wherein the user specific criteria and the user specific parameters are the same.

80. (Previously Presented) The computer readable medium as recited in claim 67 wherein at least one of the user specific criteria is different from any of the user specific parameters.

81. (Previously Presented) The computer readable medium as recited in claim 67 wherein at least one of the user specific criteria is the same as one of the user specific parameters.

82. (Previously Presented) A computer readable medium having a sequence of instructions which, when executed by a processing entity, effectuates a trade in a user selected user preferred security, the computer readable medium comprising:

- a code segment for receiving security data for a plurality of securities from a security data source;

- a code segment for receiving from a user at least two user specific criteria including at least one criterion related to pricing;

- a code segment for automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user;

- a code segment for receiving at least first, second and third user specific parameters from the user;

- a code segment for generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin;

- a code segment for plotting each of the user preferred securities as an icon on the graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis,

thereby representing and graphically differentiating the user preferred securities from one another;

a code segment for receiving a user selection of one of the user preferred securities represented on the graph;

a code segment for associating order parameters with the user selected user preferred security; and

a code segment for sending an order to execute a trade in the user selected user preferred security according to the order parameters.

83. (Previously Presented) A system for enabling a trade in a user selected user preferred security, the system comprising:

means for identifying user preferred securities from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing;

means for generating a graph in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities;

means for receiving a user selection of one of the user preferred securities represented on the graph;

means for associating order parameters with the user selected user preferred security; and

means for sending an order to execute a trade in the user selected user preferred security according to the order parameters.

84. (Previously Presented) The system as recited in claim 83 wherein the at least one criterion related to pricing is one of: Current Price, High/Low, Open/Close, Daily High/Low Count, 52 Week High/Low, Gap, Change from Close/Open, Change from X Day/Month/YTD Avg Close, X Day/Month/YTD High/Low, 15/60/120 Day SMA, 15/60/120 Day EMA, Rate of Change, 10/30/50 Day RSI,

10/30/50 Day RSI from Close, Bollinger Bands, MACD, 20/40/60 Day Momentum, 20/40/60 Day Momentum from Close, Money Flow, Money Flow (%), Williams %R, PE Ratio, and Market Cap.

85. (Previously Presented) The system as recited in claim 83 wherein the means for associating order parameters with the selected user preferred security further comprises means for associating a number of shares, a price and an execution location with the user selected user preferred security.

86. (Previously Presented) The system as recited in claim 83 further comprising means for preloading the order parameters prior to the selection of one of the user preferred securities represented on the graph.

87. (Previously Presented) The system as recited in claim 83 wherein the means for sending an order to execute a trade in the user selected user preferred security further comprises means for sending an order selected from the group comprising a buy order, a sell order, a short order and a cancel order.

88. (Previously Presented) The system as recited in claim 83 further comprising means for performing compliance analysis on the order.

89. (Previously Presented) The system as recited in claim 83 further comprising means for storing information relating to the order in a database.

90. (Previously Presented) The system as recited in claim 83 further comprising means for receiving a continuously updated stream of security data, including level one, level two and time and sales data, relating to the plurality of securities.

91. (Previously Presented) The system as recited in claim 83 further comprising means for receiving a continuously updated stream of security data, including at least one of fundamental data and analytical data, relating to the plurality of securities.

92. (Previously Presented) The system as recited in claim 83 wherein means for generating a graph comprises means for displaying a three dimensional coordinate system having mutually perpendicular axes intersecting at a common origin and representing the user preferred securities as visually distinct graphical icons located within the coordinate system at positions representative of the values of each of the user preferred securities.

93. (Previously Presented) The system as recited in claim 92 wherein the means for generating a graph further comprises means for altering characteristics of the visually distinct graphical icons to represent dimensions greater than 3.

94. (Previously Presented) The system as recited in claim 83 wherein each of the user specific criteria is different from each of the user specific parameters.

95. (Previously Presented) The system as recited in claim 83 wherein the user specific criteria and the user specific parameters are the same.

96. (Previously Presented) The system as recited in claim 83 wherein at least one of the user specific criteria is different from any of the user specific parameters.

97. (Previously Presented) The system as recited in claim 83 wherein at least one of the user specific criteria is the same as one of the user specific parameters.

98. (Previously Presented) A system for enabling a trade in a user selected user preferred security, the system comprising:

means for receiving security data for a plurality of securities from a security data source;

means for receiving from a user at least two user specific criteria including at least one criterion related to pricing;

means for automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user;

means for receiving at least first, second and third user specific parameters from the user;

means for generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin;

means for plotting each of the user preferred securities as an icon on the graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis, thereby representing and graphically differentiating the user preferred securities from one another;

means for receiving a user selection of one of the user preferred securities represented on the graph;

means for associating order parameters with the user selected user preferred security; and

means for sending an order to execute a trade in the user selected user preferred security according to the order parameters.

99. (Previously Presented) A method for enabling a trade in a user selected user preferred security, the method comprising:

identifying user preferred securities from a plurality of securities based upon at least two user specific criteria including at least one criterion related to pricing;

generating a graph in which each of the user preferred securities is represented and graphically differentiated from each of the other user preferred securities based upon the values of at least three user specific parameters associated with each of the user preferred securities;

receiving a user selection of one of the user preferred securities represented on the graph;

associating order parameters with the user selected user preferred security; and

sending an order to execute a trade in the user selected user preferred security according to the order parameters.

100. (Previously Presented) The method as recited in claim 99 wherein the at least one criterion related to pricing is one of: Current Price, High/Low, Open/Close, Daily High/Low Count, 52 Week High/Low, Gap, Change from Close/Open, Change from X Day/Month/YTD Avg Close, X Day/Month/YTD High/Low, 15/60/120 Day SMA, 15/60/120 Day EMA, Rate of Change, 10/30/50 Day RSI, 10/30/50 Day RSI from Close, Bollinger Bands, MACD, 20/40/60 Day

Momentum, 20/40/60 Day Momentum from Close, Money Flow, Money Flow (%), Williams %R, PE Ratio, and Market Cap.

101. (Previously Presented) The method as recited in claim 99 wherein the step of associating order parameters with the selected user preferred security further comprises associating a number of shares, a price and an execution location with the user selected user preferred security.

102. (Previously Presented) The method as recited in claim 99 further comprising preloading the order parameters prior to the step of receiving the user selection of one of the user preferred securities represented on the graph.

103. (Previously Presented) The method as recited in claim 99 wherein the step of sending an order to execute a trade in the user selected user preferred security further comprises sending an order selected from the group comprising a buy order, a sell order, a short order and a cancel order.

104. (Previously Presented) The method as recited in claim 99 further comprising performing compliance analysis on the order.

105. (Previously Presented) The method as recited in claim 99 further comprising storing information relating to the order in a database.

106. (Previously Presented) The method as recited in claim 99 further comprising receiving a continuously updated stream of security data, including level one, level two and time and sales data, relating to the plurality of securities.

107. (Previously Presented) The method as recited in claim 99 further comprising providing a continuously updated stream of security data, including at least one of fundamental data and analytical data, relating to the plurality of securities.

108. (Previously Presented) The method as recited in claim 99 wherein the step of generating a graph comprises displaying a three dimensional coordinate system having mutually perpendicular axes intersecting at a common origin and representing the user preferred securities as visually distinct graphical icons located within the coordinate system at positions representative of the values of each of the user preferred securities.

109. (Previously Presented) The method as recited in claim 99 wherein the step of generating a graph further comprises altering characteristics of the visually distinct graphical icons to represent dimensions greater than 3.

110. (Previously Presented) The method as recited in claim 99 wherein each of the user specific criteria is different from each of the user specific parameters.

111. (Previously Presented) The method as recited in claim 99 wherein the user specific criteria and the user specific parameters are the same.

112. (Previously Presented) The method as recited in claim 99 wherein at least one of the user specific criteria is different from each of the user specific parameters.

113. (Previously Presented) The method as recited in claim 99 wherein at least one of the user specific criteria is the same as one of the user specific parameters.

114. (Previously Presented) A method for enabling a trade in a user selected user preferred security, the method comprising:

receiving security data for a plurality of securities from a security data source;

receiving from a user at least two user specific criteria including at least one criterion related to pricing;

automatically identifying within the plurality of securities at least two user preferred securities conforming to the user specific criteria received from the user;

receiving at least first, second and third user specific parameters from the user;

generating a graph having first, second and third mutually-orthogonal axes intersecting at a common origin;

plotting each of the user preferred securities as an icon on the graph at a coordinate corresponding to the value of the first parameter of that user preferred security along the first axis, corresponding to the value of the second parameter of that user preferred security along the second axis and corresponding to the value of the third parameter of that user preferred security along the third axis, thereby representing and graphically differentiating the user preferred securities from one another;

receiving a user selection of one of the user preferred securities represented on the graph;

associating order parameters with the user selected user preferred security; and

sending an order to execute a trade in the user selected user preferred security according to the order parameters.

Appendix B - Evidence

None.

Appendix C - Related Proceedings

None.